(12) UK Patent Application (19) GB (11) 2 207 894 (13) A

(43) Application published 15 Feb 1989

(21) Application No 8817892

(22) Date of filing 27 Jul 1988

(30) Priority data
(31) 8719183 (32) 13 Aug 1987 (33) GB

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(51) INT CL*
B62B 3/04 B65D 21/02

(52) Domestic classification (Edition J):
B7B TN

(56) Documents cited
GB 1595210 GB 1386128 GB 1338331
GB 1320804 WO A1 87/05581 US 3915098
US 3675595

(58) Field of search
B7B
B8H
Selected US specifications from IPC sub-classes
B62B B65D

# (54) Transport for containers

(57) A dolley for containers is moulded from foam plastics and has a rectangular floor (10) supporting castors (44) and having upwardly and downwardly projecting flanges (18, 20, 34, 36) at its edges. The flanges have notches and/or protrusions to locate container bases of various shapes stacked on the dolley and the dolley can be stacked on a similar dolley, arranged at 90° thereto.

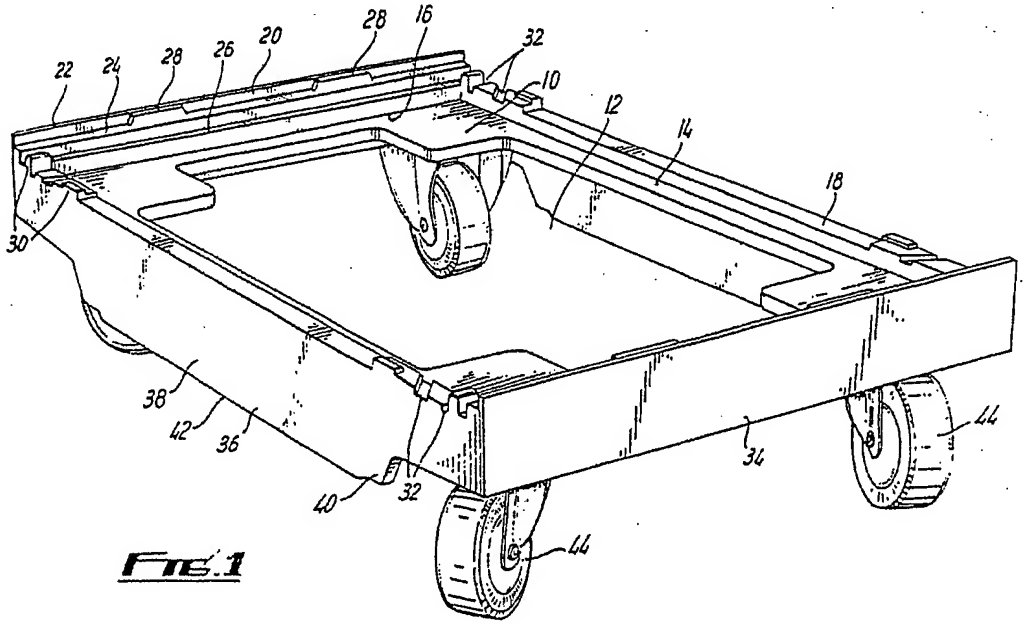


Fig.1

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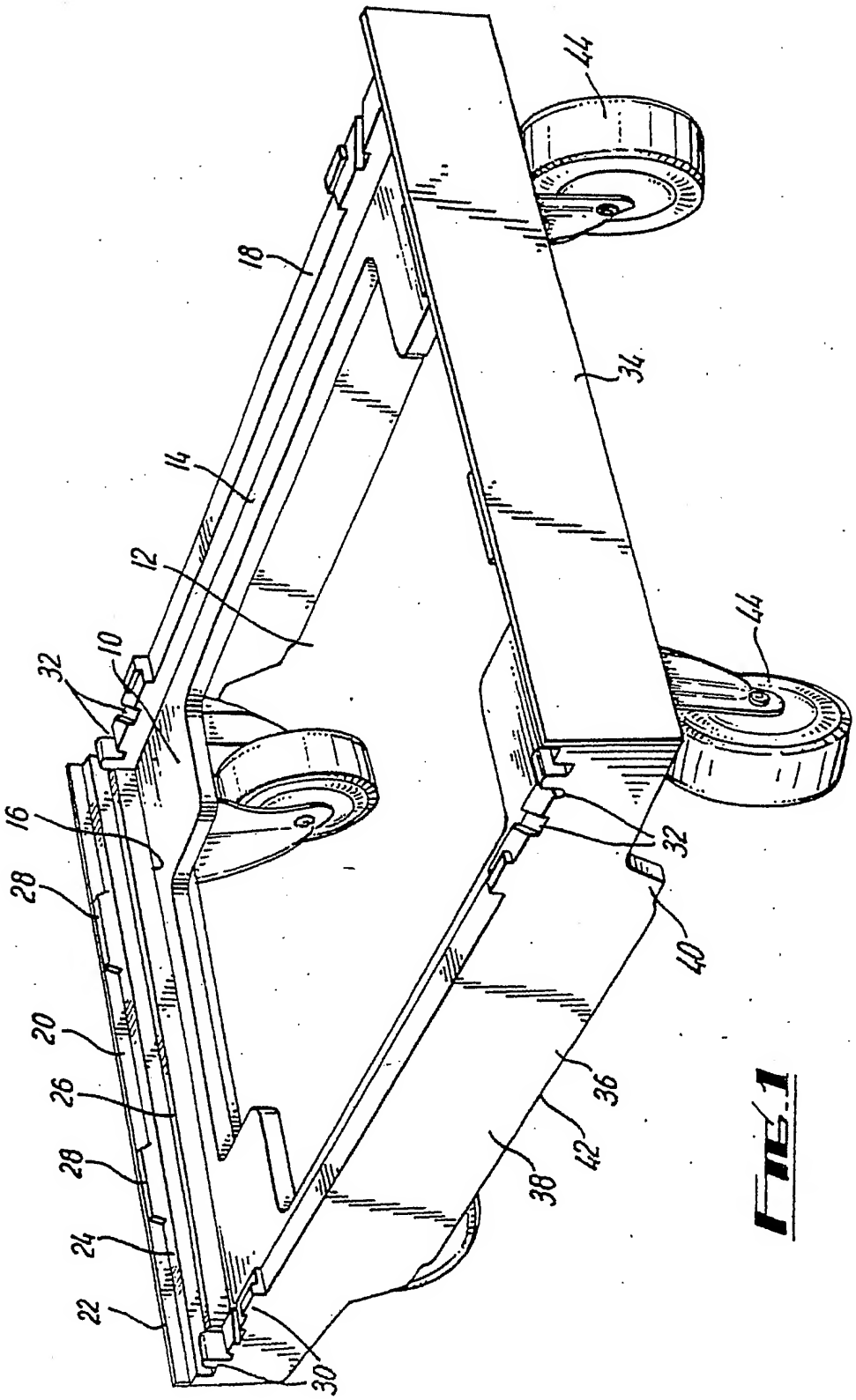


FIG.1

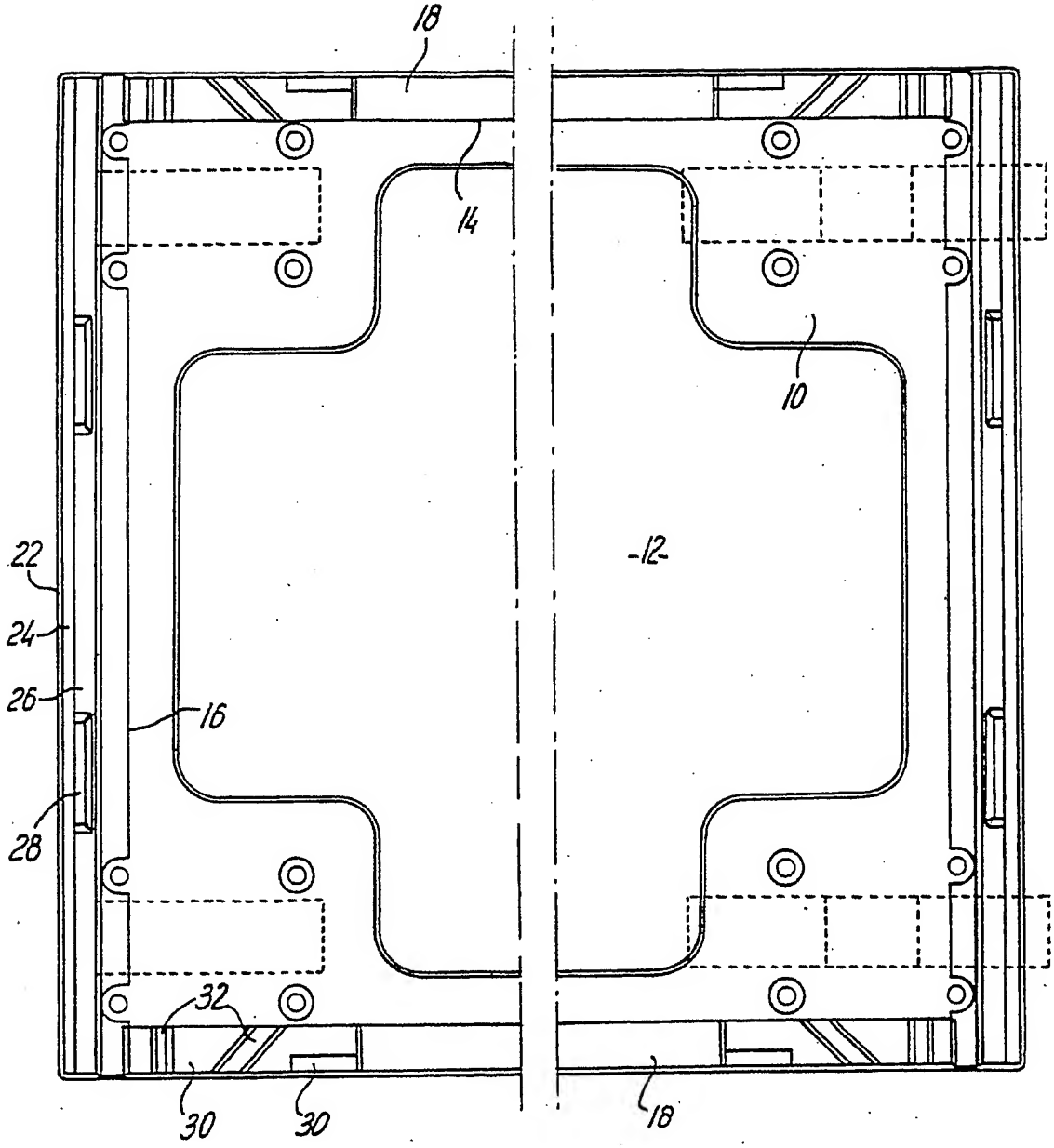


FIG.2

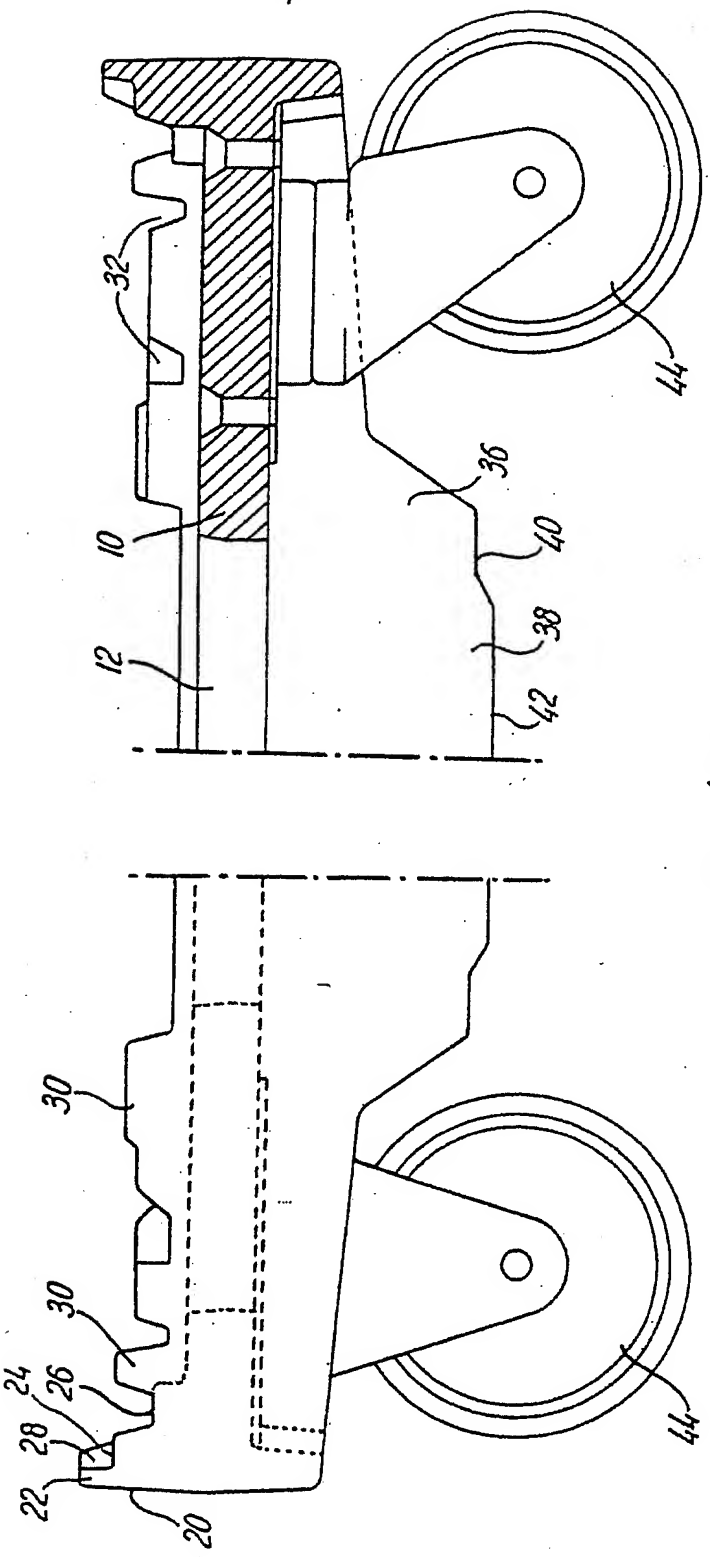


FIG. 3

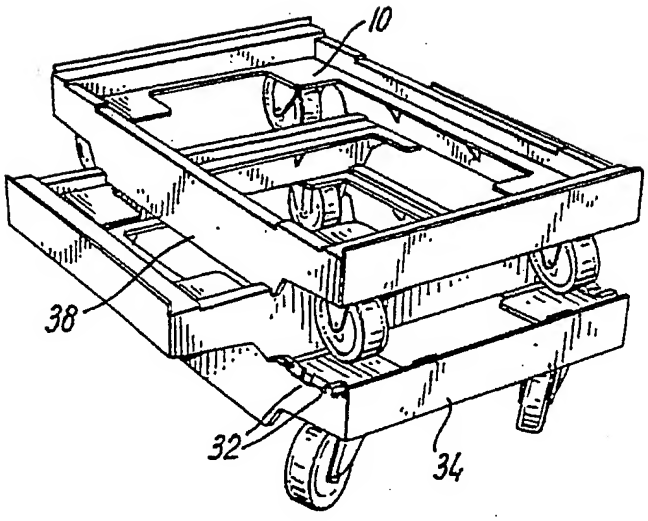


FIG.4

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# Transport Arrangement for Containers

The present invention concerns a transport arrangement for containers, especially but not exclusively a wheeled transport arrangement for a stack of trays or containers which normally find their end use in a shop, supermarket or warehouse.

Currently foodstuffs and other products are transported from the manufacturer to the shop sales area in plastics material trays or containers which are arranged in a stack, the containers often being nestable after emptying so that on return to the factory for re-use they occupy the minimum space. In certain instances a stack of trays provides the shop floor dispensing arrangement while in other circumstances the containers are emptied onto shelves.

It is often found that one manufacturer uses different containers from other manufacturers and even that one manufacturer uses different containers for different products.

It has been proposed in the past to provide a wheeled platform or dolley on which a stack of containers can be rested so that the transportation of the stack from, for example, a delivery lorry to the

shop floor is an easy matter. In view of the variety of containers which one shop, supermarket or warehouse may encounter a large number of dolleys are required as the relatively complex shapes and configuration of the base of the containers and the fact that it is desirable that the dolley provides positive location for the stack of containers dictates that a dolley dedicated to each container type is necessary.

It is one object of the present invention to obviate or mitigate this disadvantage.

Dolleys of this nature are subject to unsympathetic handling and they must be robust while at the same time being relatively light in weight. This precludes the use of metal which has the disadvantage of being heavy and costly to maintain.

In is another object of the present invention to obviate or mitigate this disadvantage.

It will be realised also that the dolleys may often remain out of use for a relatively long period of time and in view of their size, they occupy a relatively large area of floor space or when stacked are unstable and consequently dangerous.

It is still a further object of the present invention to obviate or mitigate this disadvantage.

According to the present invention there is provided a transport arrangement for containers, comprising a chassis manufactured from a structural foam plastics material and having on its upper face locating means engagable with a container having any one of a plurality of base configurations, the chassis of the arrangement having downwardly directed extensions whereby one arrangement when not in use are capable of being stacked on another similar arrangement.

Preferably the chassis of the arrangement has wheels projecting from its underside the wheels being mounted on castors with one wheel at each corner of the substantially rectangular chassis.

Preferably the chassis comprises a floor member with a peripheral frame. The floor member may have one or more passages formed therethrough to reduce weight and the peripheral frame may comprise flange members which project upwardly and downwardly from the floor.

Preferably each upwardly directed flange member is

provided with a plurality of downwardly directed notches and/or upwardly projected protrusions adapted, in use, to interfit with corresponding downwardly directed protrusions and/or upwardly directed channels in the base of the container to be stacked thereon.

Preferably the longer downwardly directed flanges have downwardly projecting extensions whereby by turning the transport arrangement through 90° with respect to a similar transport arrangement it can be stacked on said similar transport arrangement with the extensions engaging between the upwardly directed flanges of the lower arrangement with its wheels clear of said lower arrangement.

An embodiment of the present invention will now be described by way of example only with reference to the accompanying drawings, in which:-

Fig. 1 shows a perspective view of a wheeled transport arrangement;

Fig. 2 a plan thereof;

Fig. 3 an end elevation, partially in section; and

Fig. 4 a photograph of several arrangements stacked on top of each other.

A transport arrangement or dolley comprises a chassis having a floor 10 with a cruciform cut-out 12 therein to reduce weight. The floor is substantially rectangular in plan and from the longer and shorter pairs of facing sides 14, 16 respectively there are provided upwardly directed flanges 18, 20. The flanges 20 along the shorter ends 16 have a stepped profile, that is they present three upwardly facing surfaces 22, 24, 26. In the present embodiment the surface 24 has two upwardly directed lugs 28 thereon.

The flanges 18 along the longer sides 14 of the chassis are provided in their end region with upwardly directed protrusions 30 and downwardly directed channels 32.

Downwardly directed flanges 34, 36 are provided from the longer and shorter sides 14, 16. The flanges 36 each have a downwardly direct extension 38 having shaped ends 40. The length of the lowermost face 42 of the extension 30 is substantially equal to the distance between the inner faces of the upwardly directed

flanges 18 on the longer sides 14 of the chassis such that when the arrangement is rotated through 90° relative to a similar arrangement it can be stacked thereon with the extension 38 located within the space defined by the facing faces of the upwardly directed flanges 18 of the lower arrangement, the end formations 40 on the extension 38 providing positive location and the depth of the combined flanges ensuring that the wheels of a still further similar arrangement, again rotated through 90°, that is with its longitudinal axis parallel to the longitudinal axis of the lowermost arrangement is sufficiently raised above the floor 10 of the lowermost arrangement that wheeled castors 44 pivotally mounted to the underside of the floor 10 at each corner thereof are clear of the upper face of the floor 10 of the lowermost arrangement.

In use a tray or container, normally of plastics material and normally of a stacking/nesting type can be positively located on the arrangement with the recesses and protrusions provided in its base to enable it to be stacked on a corresponding container mating with appropriate steps 22, 24, 26 and/or lugs 28, 30 and/or channels 38 to provide positive location of the container on the arrangement. As a result of the

variety of steps, protrusions and channels a number of different containers can be positively located on the arrangement. The containers may be arranged within the external periphery of the arrangement or may project therefrom on one or more pair of sides. When they are arranged within the periphery they do not necessarily engage with protrusions and recesses but are simply located by engagement of their sides with for example the sides of the steps.

To provide for rigidity, hardwearing properties and lightness, the arrangement of the present invention, with the exception of its castors, is moulded as a single unit from a foamed plastics material.

Various modifications can be made without departing from the scope of the invention; for example the chassis, that is the floor and upstanding flanges of the arrangement, can take any suitable shape provided that they provide a positive location for a number of containers of different base configurations, that one arrangement can be stacked on top of another, not necessarily at a 90° displacement, and that castors or other wheels or roller arrangements may be mounted

to the underside thereof to ease transportation. In an alternative stacking arrangement the shaped ends 40 of the downwardly directed flanges 34, 36 are replaced by notches or slots.

Claims:-

1. A transport arrangement for containers, comprising a chassis manufactured from a structural foam plastics material and having on its upper face locating means engagable with a container having any one of a plurality of base configurations, the chassis of the arrangement having downwardly directed extensions whereby one arrangement when not in use are capable of being stacked on another similar arrangement.

2. An arrangement as claimed in claim 1, in which the chassis has wheels projecting from its underside, the wheels being mounted on castors with one wheel at each corner of the substantially rectangular chassis.

3. An arrangement as claimed in claim 1 or claim 2, in which the chassis comprises a floor member with a peripheral frame.

4. An arrangement as claimed in claim 3, in which the floor member has one or more passages formed therethrough to reduce weight.

5. An arrangement as claimed in claim 3 or claim 4,

in which the peripheral frame comprises flange members which project upwardly and downwardly from the floor.

6. An arrangement as claimed in claim 5, in which each upwardly directed flange member is provided with a plurality of downwardly directed notches and/or upwardly projected protrusions adapted, in use, to